

### REMARKS

Claims 1-4, 6-8, 10-14, 16, and 17 are pending. Applicants have added new claim 18. Claims 1-4, 6-8, 13, 14, 16, and 17 have been examined, and claims 10-12 presently stand withdrawn as being drawn to non-elected subject matter. Claims 1-4, 6-8, 10-14, and 16-18 will therefore be pending upon entry of the proposed amendments.

#### **Amendments to claims and title of the application**

Applicants have deleted "heteroaryl" from the definitions of variables  $R^9$ ,  $R^{10}$ , and  $R^{11}$  in claim 1. Applicants have deleted the phrase "or  $R^1$  and  $R^2$  together can form a 3-8 membered ring optionally containing one or more atoms selected from O, S,  $NR^6$  and itself optionally substituted by one or more  $C_1$ - $C_3$  alkyl or halogen;" from claim 2.

These amendments are being made for the sole purpose of expediting prosecution of the present application, and in particular, to bring the claims into conformity with what is understood to be the presently elected restriction group.

Support for new claim 18 can be found throughout the specification, e.g., at page 23, lines 9-16.

Applicants have replaced the original title with "Phenoxyacetic Acid Compounds."

No new matter is introduced by these amendments.

Applicants expressly reserve the right to pursue any or all of the above cancelled subject matter in a later filed divisional application.

#### **Rejoinder**

[1] Claims 10-12 and 18, each of which depends directly or indirectly from claim 1, are directed to (i) processes of using the compounds as claimed in claim 1; and (ii) pharmaceutical compositions that include the compounds as claimed in claim 1, respectively. Applicants submit that claims 10-12 and 18 as presently written, are eligible for rejoinder and joinder, respectively, with claims 1-4, 6-8, 13, 14, 16, and 17 once claims 1-4, 6-8, 13, 14, 16, and 17 are deemed allowable by the Office. Applicants respectfully request that claims 10-12

and 18 be rejoined and joined, respectively, with claims 1-4, 6-8, 13, 14, 16, and 17 once claims 1-4, 6-8, 13, 14, 16, and 17 are deemed allowable by the Office.

[2] Claims 10-12 and 18 should be rejoined and joined, respectively, for at least for the following additional reason. The present application is a U.S. National Stage application. As such, the present application is subject to unity of invention practice in accordance with 37 CFR 1.475 and 1.499 (see MPEP § 1896). Each of claims 10-12 and 18 share a special technical feature, which is also the same special technical feature required by claim 1 (the compounds of formula (I) as presently claimed in claim 1). In addition, 37 CFR § 1.475(b)(2) states that a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn to a combination of a product and a process of use of said product, which is the case with claims 10-12. Thus, all claims, regardless of whether they are compound, pharmaceutical composition, method of making, or method of using, possess unity in the present case and should be examined in the present application.

#### Claim Objection

Claims 1-4, 6-8, 13, 14, 16, and 17 are objected to as containing non-elected subject matter. According to the Office: “[t]o overcome this objection, Applicant should submit an amendment deleting the non-elected subject matter” (Office Action, page 3).

[1] Responsive to a Restriction Requirement (mail date of August 30, 2007), Applicants elected Group I in a reply filed on October 1, 2007. It is Applicants' understanding that Group I encompasses the following subject matter:

X is C<sub>1-6</sub>alkyl or OR<sup>6</sup>;

Y is as defined in claim 1;

Z is phenyl (optionally substituted by one or more substituents independently selected from those recited in claim 1);

R<sup>1</sup> and R<sup>2</sup> are as defined in claim 1, excluding wherein R<sup>1</sup> and R<sup>2</sup> together can form a 3-8 membered ring optionally containing one or more atoms selected from O, S, NR<sup>6</sup>;

$R^3$  is defined as in claim 1;

$R^4$  and  $R^5$  are as defined in claim 1, excluding wherein  $R^4$  and  $R^5$  together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocyclic ring optionally containing one or more atoms selected from O,  $S(O)_n$ , and  $NR^8$ ;

$R^6$  and  $R^7$  independently represents a hydrogen atom of  $C_{1-6}$  alkyl;

$R^8$  is as defined in claim 1;

$R^9$  is as defined in claim 1, excluding heteroaryl; and

$R^{10}$  and  $R^{11}$  are as defined in claim 1 excluding heteroaryl and wherein  $R^{10}$  and  $R^{11}$  together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocyclic ring optionally containing one or more atoms selected from O,  $S(O)_n$ ,  $NR^8$ .

[2] Applicants' reply of October 1, 2007 included an amendment instructing the Office to delete non-elected subject matter (a copy of the claims as amended in the reply of October 1, 2007 is included for the convenience of the Office). In view of this amendment, it appears that the Office's objection applies only to claim 1 (which recited "heteroaryl" in the definitions of variables  $R^9$ ,  $R^{10}$ , and  $R^{11}$ ) and claim 2 (which recited "or  $R^1$  and  $R^2$  together can form a 3-8 membered ring optionally containing one or more atoms selected from O, S,  $NR^6$  and itself optionally substituted by one or more  $C_1$ - $C_3$  alkyl or halogen;"). Applicants submit the foregoing amendments to claims 1 and 2 overcome the present objection and respectfully request that the objection be withdrawn.

Applicant : Pairaudeau et al.  
Serial No. : 10/552,082  
Filed : October 5, 2005  
Page : 11 of 11

Attorney's Docket No.: 06275-472US1 / 101017-1P US

CONCLUSION

The fee for the one month extension fee (\$120) is being paid concurrently herewith on the Electronic Filing System (EFS) by way of a Deposit Account authorization. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket No. 06275-472US1 / 101017-1P US.

Respectfully submitted,

Date: February 29, 2008

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Pairaudeau et al.  
Serial No. : 10/552,082  
Filed : October 5, 2005  
Title : NOVEL COMPOUNDS

Art Unit : 1626  
Examiner : Shawquia Young  
Conf. No. : 8802

**Mail Stop Amendment**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

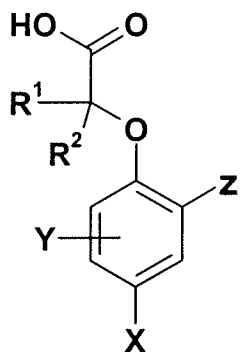
RESPONSE TO RESTRICTION REQUIREMENT

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A compound of formula (I) or a pharmaceutically acceptable salt thereof:



(I)

in which:

X is C<sub>1-6</sub>alkyl or OR<sup>6</sup>;

Y is selected from hydrogen, halogen, CN, nitro, SO<sub>2</sub>R<sup>3</sup>, OR<sup>4</sup>, SR<sup>4</sup>, SOR<sup>3</sup>, SO<sub>2</sub>NR<sup>4</sup>R<sup>5</sup>, CONR<sup>4</sup>R<sup>5</sup>, NR<sup>4</sup>R<sup>5</sup>, NR<sup>6</sup>SO<sub>2</sub>R<sup>3</sup>, NR<sup>6</sup>CO<sub>2</sub>R<sup>6</sup>, NR<sup>6</sup>COR<sup>3</sup>, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>1-6</sub>alkyl, the latter four groups being optionally substituted by one or more substituents independently selected from halogen, OR<sup>6</sup> and NR<sup>6</sup>R<sup>7</sup>, S(O)<sub>n</sub>R<sup>6</sup>; n is 0, 1 or 2;

Z is phenyl ~~aryl or a ring A, where A is a six membered heterocyclic aromatic ring containing one or more nitrogen atoms or may be a 6,6 or 6,5 fused bicycle containing one or more O, N, S atoms, the aryl or A rings all being~~ optionally substituted by one or more substituents independently selected from from hydrogen, halogen, CN, OH, SH, nitro, COR<sup>9</sup>, CO<sub>2</sub>R<sup>6</sup>, SO<sub>2</sub>R<sup>9</sup>, OR<sup>9</sup>, SR<sup>9</sup>, SOR<sup>9</sup>, SO<sub>2</sub>NR<sup>10</sup>R<sup>11</sup>, CONR<sup>10</sup>R<sup>11</sup>, NR<sup>10</sup>R<sup>11</sup>, NHSO<sub>2</sub>R<sup>9</sup>, NR<sup>9</sup>SO<sub>2</sub>R<sup>9</sup>, NR<sup>6</sup>CO<sub>2</sub>R<sup>6</sup>, NHCOR<sup>9</sup>, NR<sup>9</sup>COR<sup>9</sup>, NR<sup>6</sup>CONR<sup>4</sup>R<sup>5</sup>, NR<sup>6</sup>SO<sub>2</sub>NR<sup>4</sup>R<sup>5</sup>, aryl, ~~heteroaryl,~~ C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>1-6</sub>alkyl, the latter four groups being optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, OR<sup>6</sup>, NR<sup>6</sup>R<sup>7</sup>, S(O)<sub>n</sub>R<sup>6</sup>, CONR<sup>6</sup>R<sup>7</sup>, NR<sup>6</sup>COR<sup>7</sup>, SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> and NR<sup>6</sup>SO<sub>2</sub>R<sup>7</sup>.

R<sup>1</sup> and R<sup>2</sup> independently represent a hydrogen atom, halogen, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or a C<sub>1-6</sub>alkyl group, the latter four groups being optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, NR<sup>6</sup>R<sup>7</sup>, OR<sup>6</sup>, S(O)<sub>n</sub>R<sup>6</sup>;

or

~~R<sup>1</sup> and R<sup>2</sup> together can form a 3-8 membered ring optionally containing one or more atoms selected from O, S, NR<sup>6</sup> and itself optionally substituted by one or more C<sub>1</sub>-C<sub>3</sub> alkyl or halogen;~~

R<sup>3</sup> represents C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>1-6</sub>alkyl which may be optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, OR<sup>6</sup> and NR<sup>6</sup>R<sup>7</sup>, S(O)<sub>n</sub>R<sup>6</sup>, CONR<sup>6</sup>R<sup>7</sup>, NR<sup>6</sup>COR<sup>7</sup>, SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> and NR<sup>6</sup>SO<sub>2</sub>R<sup>7</sup>;

R<sup>4</sup> and R<sup>5</sup> independently represent hydrogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>1-6</sub>alkyl, the latter two groups being optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, OR<sup>6</sup> and NR<sup>6</sup>R<sup>7</sup>, S(O)<sub>n</sub>R<sup>6</sup>, CONR<sup>6</sup>R<sup>7</sup>, NR<sup>6</sup>COR<sup>7</sup>, SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> and NR<sup>6</sup>SO<sub>2</sub>R<sup>7</sup>;

or

~~R<sup>4</sup> and R<sup>5</sup> together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocyclic ring optionally containing one or more atoms selected from O, S(O)<sub>n</sub>, NR<sup>8</sup>, and itself optionally substituted by halogen or C<sub>1-3</sub> alkyl;~~

R<sup>6</sup> and R<sup>7</sup> independently represents a hydrogen atom or C<sub>1</sub>-C<sub>6</sub> alkyl;

R<sup>8</sup> is hydrogen, C<sub>1-4</sub> alkyl, -COC<sub>1-4</sub> alkyl, CO<sub>2</sub>C<sub>1-4</sub>alkyl or CONR<sup>6</sup>C<sub>1-4</sub>alkyl;

R<sup>9</sup> represents aryl, ~~heteroaryl~~, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>1-6</sub>alkyl, the latter two groups may be optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, aryl, heteroaryl OR<sup>6</sup> and NR<sup>6</sup>R<sup>7</sup>, S(O)<sub>n</sub>R<sup>6</sup>, CONR<sup>6</sup>R<sup>7</sup>, NR<sup>6</sup>COR<sup>7</sup>, SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> and NR<sup>6</sup>SO<sub>2</sub>R<sup>7</sup>;

R<sup>10</sup> and R<sup>11</sup> independently represent aryl ~~or heteroaryl~~, hydrogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>1-6</sub>alkyl, the latter two groups being optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, aryl, heteroaryl, OR<sup>6</sup> and NR<sup>6</sup>R<sup>7</sup>, S(O)<sub>n</sub>R<sup>6</sup>, CONR<sup>6</sup>R<sup>7</sup>, NR<sup>6</sup>COR<sup>7</sup>, SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> and NR<sup>6</sup>SO<sub>2</sub>R<sup>7</sup>;

2. (Previously presented) A compound according to claim 1 in which R<sup>1</sup> and R<sup>2</sup> independently represent a hydrogen atom, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>7</sub> cycloalkyl or a C<sub>1-6</sub>alkyl group, the latter four groups being optionally substituted by one or more substituents independently selected from halogen, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, NR<sup>6</sup>R<sup>7</sup>, OR<sup>6</sup>, S(O)<sub>n</sub>R<sup>6</sup> or R<sup>1</sup> and R<sup>2</sup> together can form a 3-8 membered ring optionally containing one or more atoms selected from O, S, NR<sup>6</sup> and itself optionally substituted by one or more C<sub>1</sub>-C<sub>3</sub> alkyl or halogen;

3. (Previously presented) A compound according to claim 1 in which X is C<sub>1-4</sub>alkyl or C<sub>1-4</sub>alkoxy.

4. (Previously presented) A compound according to claim 1 in which Y is hydrogen.



5. (Cancelled)

6. (Currently amended) A compound according to claim 1 in which Z is ~~phenyl or~~  
~~optionally~~ substituted by one or more substituents independently selected from halogen, C<sub>1</sub>-  
C<sub>3</sub>alkyl, cyano and SO<sub>2</sub>R<sup>9</sup>.

7. (Previously presented) A compound according to claim 1 in which R<sup>1</sup> and R<sup>2</sup> are both  
hydrogen or one is hydrogen and the other is C<sub>1-3</sub> alkyl.

8. (Previously presented) A compound according to claim 1 selected from:

[(5-Methylbiphenyl-2-yl)oxy]acetic acid,

{[5-Ethyl-4'-(methylsulfonyl)biphenyl-2-yl]oxy}acetic acid,

{[4'-(Ethylsulfonyl)-5-methoxybiphenyl-2-yl]oxy}acetic acid,

[[4-Chloro-4'-(ethylsulfonyl)-2',5-dimethyl[1,1'-biphenyl]-2-yl]oxy]-acetic acid,

[[4'-(Ethylsulfonyl)-2',5-dimethyl[1,1'-biphenyl]-2-yl]oxy]-acetic acid,

2-[[3'-Cyano-5-methyl[1,1'-biphenyl]-2-yl]oxy]-(2S)-propanoic acid,

2-[[2'-Fluoro-5'-cyano-5-methyl[1,1'-biphenyl]-2-yl]oxy]-(2S)-propanoic acid,

and pharmaceutically acceptable salts thereof.

9. (Cancelled)

10. (Withdrawn) A method of treating a disease mediated by prostaglandin D<sub>2</sub>, which  
comprises administering to a patient a therapeutically effective amount of a compound of  
formula (I), or a pharmaceutically acceptable salt as defined in claim 1.

11. (Withdrawn) A method of treating a respiratory disease in a patient suffering from, or at  
risk of, said disease, which comprises administering to the patient a therapeutically effective  
amount of a compound of formula (I), or a pharmaceutically acceptable salt or solvate thereof, as  
defined in claim 1.

12. (Withdrawn) The method of claim 11, wherein the respiratory disease is asthma or rhinitis.
13. (Previously presented) A compound according to claim 2 in which X is C<sub>1-4</sub>alkyl or C<sub>1-4</sub>alkoxy.
14. (Previously presented) A compound according to claim 2 in which Y is hydrogen.
15. (Cancelled)
16. (Currently amended) A compound according to claim 2 in which Z is ~~phenyl or optionally~~ substituted by one or more substituents independently selected from halogen, C<sub>1-3</sub>alkyl, cyano and SO<sub>2</sub>R<sup>9</sup>.
17. (Previously presented) A compound according to claim 2 in which R<sup>1</sup> and R<sup>2</sup> are both hydrogen or one is hydrogen and the other is C<sub>1-3</sub> alkyl.

REMARKS

Responsive to the action mailed August 30, 2007, Applicants elect the invention of Group I drawn to the embodiment of X is C<sub>1-6</sub>alkyl or OR<sup>6</sup>; Y is as defined in claim 1; Z is phenyl; R<sup>1</sup> and R<sup>2</sup> are as defined in claim 1, excluding wherein R<sup>1</sup> and R<sup>2</sup> together can form a 3-8 membered ring optionally containing one or more atoms selected from O, S, NR<sup>6</sup>; R<sup>3</sup> is defined as in claim 1, R<sup>4</sup> and R<sup>5</sup> are as defined in claim 1, excluding wherein R<sup>4</sup> and R<sup>5</sup> together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocyclic ring optionally containing one or more atoms selected from O, S(O)<sub>n</sub>, NR<sup>8</sup>; R<sup>6</sup> and R<sup>7</sup> independently represents a hydrogen atom of C<sub>1-6</sub> alkyl; R<sup>8</sup> is as defined in claim 1, R<sup>9</sup> is as defined in claim 1, excluding heteroaryl; R<sup>10</sup> and R<sup>11</sup> are as defined in claim 1 excluding heteroaryl and wherein R<sup>10</sup> and R<sup>11</sup> together with the nitrogen atom to which they are attached can form a 3-8 membered saturated heterocyclic ring optionally containing one or more atoms selected from O, S(O)<sub>n</sub>, NR<sup>8</sup>. The election is made without traverse.

Applicants have amended claims 1, 6, and 16, and cancelled claims 5 and 15 to make the pending claims commiserate with the election. According to M.P.E.P. § 821.04, Applicants have withdrawn claims 10-12, which recite methods of treating disorders comprising administering a compound of claim 1. Applicants request that these claims be rejoined when all the claims directed to the elected invention are in condition for allowance.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: October 1, 2007

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